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EPO - DG 1

AMENDED CLAIMS

[received by the International Bureau on 04 October 2004 (04.10.2004);
original claims 1-14 replaced by amended claims 1-14 (3 pages)]

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(75)

- 1 A surgical ratchet (10) having a handle (10), a driver (14) received within the handle in a rotatable relationship with respect thereto, a ratcheting mechanism (16) interposed between the handle and driver, and a locking mechanism (20) releasably holding the handle to the ratchet mechanism, wherein displacing of the locking mechanism to an unlock position moves a locking obstruction (32) out of an obstructing position thereby permitting easy release of the ratchet mechanism from the handle and ready .. disassembly of the ratchet mechanism from the handle.
- 2 The ratchet (10) of claim 1, wherein the locking mechanism (20) comprises a ring (24) rotatable on the handle (12), the ring having a surface selectively biasing a ball (32) into or out of a recess (34) to engage or disengage the ratchet mechanism (16) to lock or unlock the assembly.
- 3 The ratchet (10) of claim 1, wherein the locking mechanism (20) comprises a surface against which a user may apply pressure to effectuate a change in interactivity of components in order to engage or disengage the ratchet mechanism (16) to lock or unlock the assembly.
- 4 The ratchet (10) of claim 1, wherein a selector (50) enables a user to activate, deactivate, or lock the ratcheting mechanism (16).
- 5 The ratchet (10) of claim 1, wherein the locking mechanism (20) is comprised of a selector (50) having a position in which at least one pawl (44, 46) is in an engaged position, wherein, when the selector is in the engaged position, the at least one pawl locks the ratchet mechanism against free movement in a selected direction.
- 6 The ratchet (10) of claim 1, wherein the locking mechanism (16) is comprised of a selector (50) having
a position in which at least one pawl (44, 46) is in a released position, wherein, when the selector is in the released position, the at least one pawl disengages the ratchet mechanism, thus permitting free motion in either direction.

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(a) a housing (22) in which left and right hand pawls (44, 46) are pivotably connected and selectively pivotably engageable by a cam selection device (50) for selection of a ratcheting direction, the cam selection device comprising a cam having a cam surface against which an end of the at least one pawl rides and wherein relative movement of the cam surface to the end of the at least one pawl causes the pawl to pivot in a prescribed manner;

(b) a toothed hub (52) connected, at least indirectly, to the handle, and

(c) a selector (50) which has a position in which at least one pawl (44, 46) is in an engaged position, wherein, when the selector is in the engaged position, the at least one pawl locks the ratchet mechanism against free movement in a selected direction, thus enabling a user to activate, deactivate, or lock the ratcheting mechanism.

- 12 The ratchet (10) of any of the foregoing claims, wherein the handle (12) is a T-bar (138).
- 13 The ratchet (10) of any one of claims 1-11, wherein the handle (12) includes an interface (140) for receiving a T-bar attachment (138).
- 14 A tool kit (150) for surgical use, the tool kit including at least the following components:
- (a) a surgical ratchet (10) having a handle (12), a driver (14) received within the handle in a rotatable relationship with respect thereto, a ratcheting mechanism (16) interposed between the handle and driver, and a locking mechanism (20) releasably holding the handle to the ratchet mechanism, wherein displacing of the locking mechanism to an unlock position moves a locking obstruction (32) out of an obstructing position, thereby permitting easy release of the ratchet mechanism from the handle and ready disassembly of the ratchet mechanism from the handle;
 - (b) at least one tool selected from a group of tools consisting of drills (134), taps (136), guide pins (130), screwdrivers (132), reamer drivers, and wire introducers; and
 - (c) a case (160) for receiving the ratchet and the at least one tool.

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- 7 The ratchet (10) of claim 1, wherein a portion of the driver (14) protrudes from an end (36) of the handle (12), thereby presenting an impactation surface enabling the ratchet to be used as an impactor.
- 8 The ratchet (10) of claim 1, wherein the ratcheting mechanism (16) comprises
(a) a housing (22) in which left and right hand pawls (44, 46) are pivotably connected and selectively pivotably engageable by a cam selection device (50) for selection of a ratcheting direction; and
(b) a toothed hub (52) connected, at least indirectly, to the handle.
- 9 The ratchet (10) of claim 8, wherein the cam selection device (50) comprises a cam having a cam surface (53) against which an end (66, 67) of the at least one pawl (44, 46) rides and wherein relative movement of the cam surface to the end of the at least one pawl causes the pawl to pivot in a prescribed manner.
- 10 The ratchet (10) of claim 8, wherein an end (66, 67) of the at least one pawl (44, 46) engaging the toothed hub (52) is formed so as to permit relative rotation with respect to the hub in one rotational direction, and to block rotation in the opposite rotational direction.
- 11 A surgical ratchet (10) having a handle (12), a driver (14) received within the handle in a rotatable relationship with respect thereto, a ratcheting mechanism (16) interposed between the handle and driver, and a locking mechanism (20) releasably holding the handle to the ratchet mechanism,
wherein the locking mechanism (20) comprises a ring (24) rotatable on the handle, the ring having a surface (53) which selectively biases a ball (32) into or out of a recess (34) to engage or disengage the ratchet mechanism (16) to lock or unlock the assembly, whereby displacing of the locking mechanism (20) into an unlock position moves a locking obstruction (32) out of an obstructing position thereby permitting easy release of the ratchet mechanism from the handle and ready disassembly of the ratchet mechanism from the handle,
wherein the ratcheting mechanism (16) comprises